



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,001	05/14/2001	Michael R. Oldenburg	14036	1209

25763 7590 07/20/2004

DORSEY & WHITNEY LLP
INTELLECTUAL PROPERTY DEPARTMENT
50 SOUTH SIXTH STREET
MINNEAPOLIS, MN 55402-1498

EXAMINER

PATEL, VISHAL A

ART UNIT	PAPER NUMBER
----------	--------------

3676

DATE MAILED: 07/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/855,001

Applicant(s)

OLDENBURG, MICHAEL R.

Examiner

Vishal Patel

Art Unit

3676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-102 is/are pending in the application.
- 4a) Of the above claim(s) 1-36, 62 and 63 is/are withdrawn from consideration.
- 5) ☒ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 37-61 and 64-102 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/29/ and 2/13/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 37-47, 49-55, 57-61, 73-78 and 80-84 are rejected under 35 U.S.C. 102(b) as being anticipated by Karcher (US. 4,696,479).

Regarding claim 37: Karcher discloses a seal comprising a housing structure surrounding a shaft, wherein the housing structure comprises means (felt member 70) for preventing foreign material from entering the sealed area (means 70 prevents foreign material from entering the sealed area).

Regarding claim 38: The housing structure comprises a sleeve (32), a casing (22) and a face plate (93), wherein the faceplate is operably coupled to the sleeve.

Regarding claim 39: A method for sealing dynamic shaft assembly containing a bore for receiving a seal (seal received in bore, figure 4), comprising, providing a seal (18) having a faceplate (93) and at least one structure filtering structure (70) between an inner and an outer portion of the seal (inner and outer portion of seal 18) of the seal that substantially limits foreign particles from entering the seal, wherein the faceplate is operably coupled to the inner portion

Art Unit: 3676

(inner portion of seal near end of 24) and placing the seal into the bore (the seal is placed in the bore as showed in figure 1).

Regarding claim 40: The seal further comprises a first flange (first flange 80) extending radially inwardly from the outer portion (outer portion of 22, 24 and 26) and a perimeter lip (38) extending radially inwardly from the first flange.

Regarding claim 41: The at least one structure (102) and the perimeter lip are constructed of elastomeric material (column 3, line 65-66 and column 1, lines 46-47).

Regarding claim 42: The seal further comprises a main sealing lip (38).

Regarding claims 43-44: The main lip is biased by a garter spring (44).

Regarding claim 45: The seal further comprises at least one excluder lip (92).

Regarding claim 46: The seal further comprises a second flange (36) extending radially outwardly from and generally perpendicular to, the inner portion (36 is generally perpendicular to inner portion 32).

Regarding claim 47: The inner portion has a bore that is coated with an elastomeric coating (102).

Regarding claim 49: A seal for sealing a dynamic shaft assembly comprising, a sleeve (32) adapted to be disposed generally coaxially around a shaft, a casing (20) adapted to be generally arranged to surround the sleeve, a faceplate (93), located between the sleeve and the casing, having an inside face and an outside face (inside and outside face of faceplate) and the face plate generally perpendicular to the sleeve (face plate 93 is perpendicular to sleeve). A filtering material portion, wherein the filtering material portion contacts the inside face of the

Art Unit: 3676

faceplate (70 contacts inside face of face place 93) and forms a filtering barrier between the faceplate and the sleeve (70 forms a filtering barrier between the faceplate and the sleeve).

Regarding claim 73: The filtering material portion forms a filetering barrier between the inside face of the faceplate and the outside face of the sleeve flange (this is the case since the filter portion or the elastomeric portion 92 prevent particles from going beyond the inside face of the faceplate).

Regarding claim 50: A first flange extending radially outwardly from the sleeve (first flange 36).

Regarding claim 51 and 74: At least one flexible member (portion above 88) extending radially outwardly from the first flange (36).

Regarding claim 52 and 75: At least one flexible member is made at least in part with an elastomeric material.

Regarding claim 53 and 76: A perimeter lip (92) extending axially inward from the flange (36).

Regarding claim 54 and 77: The perimeter lip is constructed at least in part with an elastomeric material.

Regarding claim 55 and 78: The filtering material is felt.

Regarding claim 57 and 80: A main sealing lip (38) in contact with the sleeve (38 contacting 32).

Regarding claim 58 and 81: The main sealing lip is made of elastomeric material (column 1, lines 46-47).

Regarding claim 59-60 and 82-83: the main sealing lip is biased with a garter spring.

Art Unit: 3676

Regarding claim 61 and 84: A second flange extending radially inwardly from the casing (flange 28).

3. Claims 64 and 67-71 are rejected under 35 U.S.C. 102(b) as being anticipated by Carson et al (US. 3,135,518).

Regarding claim 64: Carson discloses a method for sealing a dynamic shaft assembly containing a bore for receiving a seal (bore receiving a seal as showed in figure 4). The method providing a seal having a faceplate (46) with an inside face and an outside face (inside and outside of faceplate 46), an inner portion (portion 23) with a first flange (22) extending radially outwardly from and generally perpendicular to the inner portion, the first flange having an inside face and an outside face (inside and outside face of 22), an outer portion generally surrounding the inner portion (outer portion 41) and at least one filtering structure (elastomeric member 26) between the outside face of the first flange and the inside face of the faceplate that substantially limits foreign particles from entering the seal (the member 26 is between the inside face of the face plate and the outside face of the first flange).

Regarding claim 67: The seal further comprises a main sealing lip (lip 35).

Regarding claims 68-69: The main sealing lip is biased by a garter spring (spring 36).

Regarding claim 70: The seal further comprises at least one excluder lip (lip 35).

Regarding claim 71: The inner portion has a bore that is coated with an elastomeric coating (inner portion of 23 has an elastomeric coating).

4. Claims 37-54, 56-61, 64-77, 79-90 and 92-102 are rejected under 35 U.S.C. 102(e) as being anticipated by Dossena et al (US. 6,450,503).

Art Unit: 3676

Regarding claims 37-38: Dossena discloses a seal comprising a housing structure adapted to surround a shaft, the housing structure comprises a means for preventing foreign material from entering the sealed area (housing where seal 1 gets placed in to form a seal between housing and shaft).

Regarding claims 39-40: Dossena discloses a method of sealing a dynamic shaft assembly containing bore for receiving a seal, comprising steps, providing a seal having a faceplate (plate 5) and at least one filtering structure (42) between an inner portion and an outer portion (inner portion 4 and outer portion 12) of the seal that substantially limits foreign particles from entering the seal. The faceplate is operably coupled to the inner portion. Placing the seal into the bore (see abstract, lines 1-2).

Regarding claim 40: The seal further comprises a first flange (flange having lip 11) extending radially inwardly from the outer portion (the outer portion 3) and a perimeter lip (11) extending radially inwardly from the first flange.

Regarding claim 41: The at least one structure and the perimeter lip are constructed from elastomeric material (the lips and the structure are made of elastomeric material).

Regarding claims 42-44: The seal further comprises a main sealing lip (7) and the main sealing lip is biased by a garter spring (41).

Regarding claim 45: The seal further comprises at least one excluder lip (35).

Regarding claim 46: The seal comprising a second flange extending radially outwardly from and generally perpendicular to the inner portion (where 5 is the second flange and the faceplate is 27, where the faceplate is operable coupled to the inner portion).

Art Unit: 3676

Regarding claim 47: The inner portion has a bore that is coated with an elastomeric coating (coating 8, which is elastomeric).

Regarding claim 48: The outer portion is covered with an elastomeric coating (coating 19).

Regarding claim 49: Dossena discloses a seal for sealing dynamic shaft assembly, the seal comprising a sleeve (2) adapted to be disposed generally coaxially around a shaft. A casing (10) adapted to be generally arranged to surround the sleeve. A faceplate (faceplate 27) located between the sleeve and the casing, having an inside face and an outside face. The faceplate generally perpendicular to the sleeve. A filtering material portion (35), wherein the filtering material portion contacts the inside face of the faceplate and forms a filtering barrier between the faceplate and the sleeve (where 35 is between 5 and 27, where 35 contacts the inside of the faceplate).

Regarding claim 50: A first flange (5) extending radially outwardly from the sleeve.

Regarding claim 51: At least one flexible member (39) extending radially outwardly from the first flange (flexible portion 39 extends outwardly from the first flange).

Regarding claim 52: The at least one flexible member is made of elastomeric material.

Regarding claims 53-54: The seal further comprising a perimeter lip (lip 40) extending axially inwardly from the flange and the perimeter lip is formed of elastomeric material.

Regarding claims 56: The filtering material is a synthetic filtering material (where the filtering material is synthetic material).

Regarding claim 57: The seal further comprising a main lip (11) contacting the sleeve.

Regarding claim 58: The main lip is made at least in part with an elastomeric material (where 11 is made of elastomeric material).

Regarding claims 59-60: The main lip is biased with a garter spring (33).

Regarding claim 61: The seal comprising a second flange extending radially inwardly from the casing (second flange 17).

Regarding claims 64-66: Dossena discloses a method for sealing a dynamic shaft assembly containing a bore for receiving a seal, the method comprising providing the seal having a faceplate (27) with an inside face and an outside face (inside face where 35 contacts and outside face where 25 contacts). An inner portion (inner portion 4) with a first flange (5) extending radially outwardly from and generally perpendicular to the inner portion. The first flange having an inside face and an outside face (5 has an inside face and an outside face). An outer portion (12) generally surrounding the inner portion. At least one filtering structure (35) between the outside face of the first flange and the inside face of the faceplate that substantially limits foreign particles from entering the seal. Placing the seal into the bore (see abstract, lines 1-2).

The seal further comprises a second flange (17) extending radially inwardly from the outer portion and a perimeter lip (40) extending radially inwardly from the first flange (5).

The at least one structure and the perimeter lip are constructed from elastomeric material.

Regarding claims 67-69: The seal further comprises a main sealing lip (31) and the main lip is biased by a garter spring (33).

Regarding claims 70-72: The seal having an excluder lip (39), the inner and outer portions are coated with an elastomeric material.

Art Unit: 3676

Regarding claim 73: Dossena discloses a seal (1) for sealing a dynamic shaft, comprising a sleeve (2) adapted to be disposed generally coaxially around a shaft and including a sleeve flange (5) extending radially outwardly from the sleeve, the sleeve flange having an inside face and an outside face. A casing (10) adapted to be generally arranged to surround the sleeve. A faceplate (27) having an inside face and an outside face (inside and outside faces of faceplate 27) and generally perpendicular to the sleeve (perpendicular to portion 4 of sleeve). A filtering material portion (35), the filtering material portion forms a filtering barrier between the inside face of the faceplate and the outside face of the sleeve flange (35 forms a filtering barrier between the inside face of the faceplate and the outside face of the sleeve).

Regarding claims 74-75: The seal having at least one flexible member (39) extending radially outwardly from the sleeve flange (39 extends outwardly). The at least one flexible member is made at least in part of elastomeric material.

Regarding claims 76-77: The seal having a perimeter lip (40) extending axially inwardly from the sleeve flange. The perimeter lip is partially made of elastomeric material.

Regarding claim 79: The filtering portion is a synthetic filtering material.

Regarding claim 80: The seal having a main sealing lip (31) in contact with the sleeve.

Regarding claim 81-83: The main sealing lip is partly made of elastomeric material and is biased by a garter spring (33).

Regarding claim 84: The seal comprising a flange (17) extending radially inwardly from the casing.

Regarding claim 85: Dossena discloses a seal for sealing dynamic shaft assembly, comprising a sleeve (2) adapted to be disposed generally coaxially around a shaft, a casing (10)

Art Unit: 3676

adapted to be generally arranged to surround the sleeve, a faceplate (27), located between the sleeve and the casing, the faceplate having an inside face and an outside face and the faceplate generally perpendicular to the sleeve (faceplate perpendicular to portion 4 of the sleeve). A filtering material (35) portion contacts the inside face of the faceplate and rotationally displaces (35 is rotationally displaces since it is mounted on the sleeve that is mounted on a shaft that is rotating) relative to the faceplate and forms a filtering barrier between the faceplate and the sleeve.

Regarding claims 86-90: The seal having a first flange (5) extending radially outwardly from the sleeve. At least one flexible member (39) extending radially outwardly from the first flange. The at least one flexible member is made of at least in part with an elastomeric material. The seal having a perimeter lip (40) extending axially inward from the flange. The perimeter lip is partly made of elastomeric material.

Regarding claim 92-97: The filtering material portion is synthetic filtering material. The seal comprises a main sealing lip (31) in contact with the sleeve. The main sealing lip partly made of elastomeric material. The main sealing lip is biased by a garter spring (33). The seal having a second flange (17) extending radially inward from the casing.

Regarding claims 98-102: Dossena discloses a seal (1) for sealing a dynamic shaft, comprising a sleeve (2) adapted to be disposed generally coaxially around a shaft and the sleeve including a flange (5) extending radially outwardly from the sleeve, the flange having an inside face and an outside face. A casing (10) adapted to be generally arranged to surround the sleeve. A faceplate (27) having an inside face and an outside face (inside and outside faces of faceplate 27) and generally perpendicular to the sleeve (perpendicular to portion 4 of sleeve). The

Art Unit: 3676

faceplate located between the sleeve and the casing. A filtering material portion (35), the filtering material portion forms a filtering barrier between the inside face of the faceplate and the outside face of the sleeve flange (35 forms a filtering barrier between the inside face of the faceplate and the outside face of the sleeve). The seal having at least one flexible member (39) extending radially outwardly from the flange, a perimeter lip (40) extending axially inward from the flange, a main sealing lip (31) in contact with the sleeve and a second flange (17) extending radially inwardly from the casing (10).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karcher in view of Fedorovich et al (US. 4,552,367).

Karcher discloses the invention substantially as claimed above but fails to disclose the outer portion is covered with an elastomeric coating. Fedorovich teaches to have an inner and an outer portions of a seal (inner portion 108 and outer portion 102 which are covered by an elastomer) to be covered by an elastomer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the outer portion of Karcher to have a covering of elastomer as taught by Fedorovich, to provide a seal between the outer portion and a housing.

Art Unit: 3676

7. Claim 72 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carson in view of Fedorovich et al.

Carson discloses the invention substantially as claimed above but fails to disclose the outer portion is covered with an elastomeric coating. Fedorovich teaches to have an inner and an outer portions of a seal (inner portion 108 and outer portion 102 which are covered by an elastomer) to be covered by an elastomer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the outer portion of Carson to have a covering of elastomer as taught by Fedorovich, to provide a seal between the outer portion and a housing.

8. Claims 56 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karcher in view of Hatch et al (US. 4,943,068).

Karcher discloses the invention substantially as claimed above but fails the filtering material portion is a synthetic filtering material. Hatch teaches to place a felt filter portion made from foam or felt material (synthetic filter 45 or felt filter). It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the filtering material of Karcher to have a synthetic filter as taught by Hatch, since having a filtering member made of felt or synthetic material is considered to be art equivalent.

9. Claims 85-91 and 93-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karcher in view of Toth et al (US. 6,257,587).

Karcher disclose the invention substantially as claimed above but fail to disclose that the filter portion is mounted on a rotational member instead of the stationary member, so the filter rotates relative to the face plate. Toth discloses a filter portion in a seal assembly that is mounted

Art Unit: 3676

either on a rotational member or a stationary member (filter 86 or 286 or 386 or 486). It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the filter portion (70) of Karcher to be mounted on the rotational member as taught by Toth, since having a filter member placed on a stationary member or a rotary member is considered to be art equivalent.

10. Claim 92 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karcher and Toth in further view of Hatch.

Karcher and Toth disclose the invention substantially as claimed above but fails the filtering material portion is a synthetic filtering material. Hatch teaches to place a felt filter portion made from foam or felt material (synthetic filter 45 or felt filter). It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the filtering material of Karcher and Toth to have a synthetic filter as taught by Hatch, since having a filtering member made of felt or synthetic material is considered to be art equivalent.

Response to Arguments

11. Applicant's arguments filed 12/29/03 have been fully considered but they are not persuasive.

Applicants' arguments against Karcher are not persuasive since Karcher discloses every limitation of the claims.

Applicants' arguments against Karcher and Fedorovich are not persuasive because the teaching is inherent that when a sealing material is placed between two members it will provide a seal between the two members.

Art Unit: 3676

Applicants' arguments for claims 64, 67-71 and 85-97 against Karcher are moot, since other references are used to rejected theses claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is (703) 308-8495. The examiner can normally be reached on Monday through Friday from 7:30 PM to 4:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight, can be reached on (703) 309-3179.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2168. Technology Center 3600 Customer Service is available at 703-308-1113. General Customer Service numbers are at 800-786-9199 or 703-308-9000. Fax Customer Service is available at 703-872-9325.

Any response to this action should be mailed to:


Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to: 703-872-9326, for formal communications for entry before Final action: or,
703-872-9327, for formal communications for entry after Final action.

For informal or draft communications, please label "**PROPOSED**" or "**DRAFT**" and fax to: 703-746-3814.

Hand-delivered responses should be brought to Crystal Park Five, 2451 Crystal Drive, Arlington, Virginia, Seventh Floor (Receptionist suite adjacent to the elevator lobby).

VP
June 1, 2004


Alison Pickard
Primary Patent Examiner
Tech. Center 3600